

What Is Claimed Is:

1. A method for setting a dominant color to describe a given image region by using a dominant color that represent the given image region and a spatial coherency (SC) on the dominant color, the method comprising:

5 comparing the spatial coherency with a predetermined threshold; and
non-uniformly quantizing the spatial coherency by mapping a quantized spatial coherency (QSC) corresponding to the spatial coherency, based on the comparison between the spatial coherency and the predetermined threshold.

10 2. The method of claim 1, wherein the spatial coherency is normalized from 0 to 1 and the threshold is 0.70.

15 3. The method of claim 1, wherein '0' for the quantized spatial coherency (QSC) means that the spatial coherency is not valid.

20 4. The method of claim 2, wherein if the spatial coherency is smaller than the threshold 0.70, a quantization value on the corresponding spatial coherency is mapped into '1', and for a region having the spatial coherency between 0.70 and 1, an uniform quantization is applied as many as a number of remaining quantization.

25 5. The method of claim 4, wherein the uniform quantization of the quantized spatial coherency (QSC) is performed based on the following formula:

$$(QSC) = (\text{int}) [(SC - 0.7)/(1.0 - 0.7) \times (2.0^{SC_BIT} - 2.0) + 0.5] + 2$$

wherein, SC_BIT is a number of bits assigned to the quantization.

6. The method of claim 2, wherein the spatial coherency is quantized by 1 bit, and wherein the QSC becomes zero (QSC = 0) if the spatial coherency is smaller than the threshold 0.70, while the QSC becomes 1 (QSC =1) if the spatial coherency is greater than the threshold 0.70.

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7. The method of claim 1, wherein the threshold includes the first threshold of 0.62 and the second threshold of 0.70.

8. The method of claim 7, wherein the spatial coherency is quantized by 2 bits or more, and wherein the QSC becomes zero (QSC = 0) if the spatial coherency is smaller than the first threshold 0.62 (SC < 0.62); the QSC becomes 1 (QSC =1) if the spatial coherency is greater than or equal to the first threshold 0.62 and smaller than the second threshold 0.70 (0.62 ≤ SC < 0.70); and an uniform quantization is applied to a region having the spatial coherency from 0.70 to 1 if the spatial coherency is greater than or equal to 0.7 (0.70 ≤ SC).

9. The method of claim 8, wherein the uniform quantization of the quantized spatial coherency (QSC) is performed based on the following formula:

$$(QSC) = (\text{int}) [(SC - 0.7)/(1.0 - 0.7) \times (2.0^{SC_BIT} - 3.0) + 0.5] + 2$$

20 wherein SC_BIT is a number of bits assigned to the quantization.

10. A method for quantizing spatial coherencies of a dominant color of an image, comprising:

normalizing the spatial coherencies from 0 to 1;

25 assigning predetermined number of bits to the spatial coherencies by 5 bits (0 to

31); and

non-uniformly quantizing the spatial coherencies to a range from 1 to 31, based upon the predetermined threshold of normalization,

wherein quantized spatial coherencies (QSC) are set to 1 if the normalized values of spatial coherencies are less than the threshold of 0.70, while spatial coherency values ranged from 0.70 to 1 are uniformly quantized to the range from 2 to 31.

11. The method according to the claim 10, wherein the quantized spatial coherency of '0' is used to signal that this element is not computed.

12. The method of claim 10, wherein the uniform quantization of the spatial coherency (QSC) is performed based on the following formula:

$$(QSC) = (\text{int}) [(SC - 0.7)/(1.0 - 0.7) \times (2.0^{SC_BIT} - 2.0) + 0.5] + 2$$

wherein SC_BIT is a number of bits assigned to the quantization.